# Small Business Economic Impact Statement 2012 Washington State Energy Code

## Prepared by the State Building Code Council, July 10, 2012

# **Executive Summary**

#### **Impact on small business**

The Washington State Building Code Council (SBCC/Council) is filing a proposed rule to adopt the 2012 edition of the International Energy Conservation Code (IECC) with state amendments (WAC 51-11). Since 1989 the State Building Code Council has been responsible for updating the state energy code to improve energy efficiency in buildings, as required by RCW19.27A, and more recently has been tasked by the legislature to meet advanced energy efficiency targets. The Council and its Energy Code Technical Advisory Group have proposed about 175 amendments to this model code. These amendments were created to (1) maintain the stringency of the 2009 State Energy Code, (2) clarify and coordinate code requirements and (3) achieve legislatively mandated improvements in the energy efficiency of buildings.

The Council has identified 24 of these state amendments that have economic impact. In addition, the model code itself contains another 30 provisions that are more stringent than the current state code.

A technical advisory group (TAG) was appointed by the Council to review and amend the 2012 IECC. The TAG included all sectors of the construction industry and regulatory community, including small businesses. A paragraph-by-paragraph review of the entire code was undertaken, and the IECC was modified with existing Washington State requirements where those were more stringent or more clearly worded. The TAG and Council then reviewed each of the 171 new amendments proposed by the public, and in some cases made extensive modifications to those proposals. All TAG meetings were open to the public, and small businesses participated actively in the process.

The majority of the amendments to the new code provide more clarity and consistency, which will streamline compliance for all stakeholders. However, the transition to the new code will require some general expenditures for design and construction businesses during the transition period, including small businesses. The degree of these impacts will diminish during the code cycle as rules become familiar and construction practices adjust. Where a code requirement increases the cost of a service or material, those businesses may see decreased revenue. Conversely, where a code requirement requires additional services or building materials, the businesses supplying those services and materials may see increased revenue.

# The cost impact on small businesses compared to the largest businesses in the state will not be disproportionate.

Each aspect of the new code was discussed and debated in the TAG and at the Council, both of which worked to mitigate the cost and maximize the energy savings of each provision. Wherever small businesses appeared to be disproportionately impacted by a code provision, the code was modified to mitigate or eliminate that difference.

The Council has found that in a competitive bidding climate, construction costs per square foot are similar between large and small industry firms. The cost to businesses of building permit plan review and inspection will not be affected by adoption of the new edition.

The impact on jobs is anticipated to be neutral or slightly positive for construction industry workers.

## **Section I: Introduction/Compliance with the Rules**

For a complete list of all state amendments contained in the proposed 2012 WSEC see this link. https://fortress.wa.gov/ga/apps/sbcc/Page.aspx?nid=116

The primary change from the current code is adoption of a national model code, the 2012 IECC. Use of a national standard in place of a unique state code will generally simplify compliance and make more code resources available for practitioners. Most of the 175 proposed amendments to this code coordinate and clarify the rules, reducing the cost of compliance. Others transfer existing and familiar provisions from the existing state energy code into the amended IECC, and are thus cost neutral. A third category of amendments are intended to optimize energy efficiency. These typically decrease energy use in the building, and thus pay for their increased construction costs over time.

Beyond expenses related to the transition to the new code format, there will be little or no additional expenses related to reporting, recordkeeping or administrative code compliance paperwork. Where TAG members noted ambiguity or unwarranted complexity, the proposed code provision was modified to mitigate such difficulties. Local code officials were represented at all TAG meetings and actively intervened to ensure that plan review and field inspection work was not made more complicated or difficult than it is under the current code.

## **Section II: Compliance Costs for Washington Businesses**

The 2012 IECC and the proposed amendments do contain significant new requirements, requiring additional expenditures by building owners. These construction costs will typically be offset by energy savings during the life of the building. The Council identified the provisions as impacting construction cost and savings in comparison with the current energy code, as listed in Appendix A.

## Section III: Analysis of Proportionate Impact on Small Businesses

# The impact on small businesses as compared with the largest businesses in the state will not be disproportionate.

The majority of Washington State firms in the design and construction fields qualify as small businesses. In some cases, larger firms may be able to negotiate lower costs for materials and subcontracts than smaller firms. In other cases, smaller firms are able to be more competitive due to lower overhead costs. Apart from those general trends however, construction is a competitive marketplace where specific contracts are won without regard to the number of employees on the bidder's staff. For this reason, the incremental costs of meeting the 2012 energy code are generally proportionate between large and small businesses.

## **Section IV: Small Business Involvement and Impact Reduction Efforts**

# Actions Taken to Reduce the Impact of the Rule on Small Businesses

The TAG identified specific amendments with a cost impact and modified the code to reduce the impact while maintaining the intent of the code. Where the SBCC found the cost of compliance for small businesses to be disproportionate, the proposed rule mitigates the cost. The proposed rule includes a definition of small business and provides exceptions for compliance with the updated regulation.

# Involvement of Small Business in the Development of the Proposed Rules

A Technical Advisory Group (TAG) composed of representatives from all sectors of industry and government reviewed the proposed changes to the 2012 WSEC. For a directory of TAG members see <a href="https://fortress.wa.gov/ga/apps/sbcc/Page.aspx?nid=116">https://fortress.wa.gov/ga/apps/sbcc/Page.aspx?nid=116</a>

**Section V: Number of affected businesses in Washington:** 

Type of business	NAICS CODE #	# IN STATE (UP TO 49 Employees)	#IN STATE (50 OR MORE Employees)
Homebuilders	236115	3985	12
Multi Family Housing Construction	236116	77	0
Residential Remodelers	236118	3468	1
Industrial Building Construction	236210	89	6
Commercial and Institutional Building Construction	236220	1305	40
Roofing Contractors	238160	973	7
Wood Window and Door Manufacturing	321911	39	2
Masonry Contractors	238140	572	1
Plumbing, Heating, Air conditioning Contractors	238220	2319	48
Insulation Contractors	238310	1006	12
Architects	541310	602	16
Engineers	541330	1665	96

#### Section VI: Jobs created or lost as a result of these Rules:

The adoption of the latest code edition is not expected to significantly impact the number of jobs in the construction industry. These rules are likely to be job neutral overall, i.e., they will not result in any job gains or losses.

The construction industry continues to experience slow growth. Employment in all sectors impacts activity in the construction sector. According to <u>Washington Occupational Employment Projections</u>, posted by the Department of Employment Security, the total number of construction trade workers statewide was 124,612 in the second quarter of 2011. There is an estimated increase of 0.6% by the second quarter of 2013, for a total number of construction trade workers of 126,093. Specialty trades show a similar pattern of slow growth by the second quarter of 2013:

Carpenters 33,821 +0.4%
 Construction laborers 16,592 +0.5%
 Plumbers, pipefitters 8,885 +0.3%

Some sectors are expected to experience slightly more positive growth. The number of engineers employed in Washington is expected to grow in this same period about 2.2% to 54,769.

# 2012 Washington State Energy Code SBEIS Appendix A Costs & Energy Impacts of 2012 Residential Energy Code

For IECC Climate Zones 4 & 5, as compared with current (2009) WSEC

Section	Changes with Significant Cost	Construction Cost Impacts	Energy Savings	Building Types	Trades Impacted
R101.4.4	Alterations – unheated to heated space: Requirement for spaces going from unheated to heated to come up to code completely	+ May require upgrades to wall, window, door and slab edge, as well as lighting controls	+ Savings may be extensive if existing space envelope (for garage, unheated basement, etc.) is uninsulated or poorly insulated.	Residential remodeling, conversion of unheated space to living space	Insulation, windows, doors, lighting
R406.2	Residential efficiency credits: Increases the number of required credits from 1.0 to 1.5	+ Cost for additional credits will vary according to selection by owner	+ Energy savings expected to be approximately 3.5%	All	Varies

Section	Changes with Limited Cost	Construction Cost Impacts	Energy Savings	Building	Trades
				Types	Impacted
R402.4.1.2	Air leakage:	Slight cost difference,	+ Savings estimate of	All	Envelope
	With change in test standard, air	since most homes meet	approx. 1% of total home		sealing
	leakage is reduced from (approx.)	this standard already	energy use		
	5.5 ACH50 to 5.0 ACH50				
R402.4.2	Fireplace damper:	+ Cost of damper and	+ Reduction in heat lost up	Houses with	Fireplace
	Fireplaces must have tight-fitting	combustion air source	chimney & air infiltration	fireplaces	
	damper and outdoor combustion	Note: this is currently a	during fireplace operation		
	air	requirement under the IRC			
R402.4.3	Fenestration air leakage:	+ May be additional cost	+ (slight) Overall envelope	All	Window, door
	Door & window air leakage rate	for doors & windows	is already being tested		
	limits 0.3 cfm/SF for windows, 0.5	labeled with tested air	anyway.		
	cfm for doors	leakage rate. However,			
		since envelope field testing			
		is already required, the			
		improved fenestration may			
		make air barrier			
		compliance easier			

R403.2.2.1	Air handler sealing:	+ Since the IECC is a	+ Reduction in air leakage	All	H VAC
	Air handlers must be sealed for	national standard, all air	losses at air handler		
	max 2% leakage	handlers will soon be			
		required to comply, so			
		there may be no extra cost			
R403.5.1	Fan efficacy:	+ As a national standard,	+ Reduced fan energy	All	HVAC
Table	Ventilation fan efficacy limits	this requirement should			
		become part of standard			
		fan performance, so there			
		may be no extra cost.			
R403.8	Snow melt controls:	+ (slight) Adds cost of	+ Prevents snow melt from	Homes with	Snow melt
	Snow melt systems require auto	thermal sensors & switch	being left on during	snow melt	systems &
	shutoff when air temp is above 40		warmer weather (or	systems	controls
	and auto or manual shutoff when		perhaps permanently)		
	pavement temp is above 50				
R403.9.2	Pool & spa controls:	+ (slight) Pool heater	+ Can prevent pool heater	Homes with	Pool & spa
	Requires time switches on heaters	controls must include auto	from running during hours	pools & in-	
	for pools & permanent in-ground	time switch, unless they	when not needed	ground spas	
	spas	have built-in timer			
R404.1	Lamps vs. luminaires:	(-) Reduced costs for more	No long-term energy use	All	Lighting
	Change from luminaire efficacy to	common light fixtures &	impact, since incandescent		
	lamp type as basis for code.	lamps	lamps are being phased out		
	Allows std screw-base fixtures		at the federal level		